

BCCM/DCG - The reliable source and destination for all your microalgae

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The Diatom Collection Gent (DCG) is part of the Belgian Coordinated Collections of Micro-organisms (BCCM) consortium and is the only Biological Resource Center (BRC) worldwide specialized in diatoms (Bacillariophyta), the most species-rich group of aquatic photosynthetic organisms (algae) in freshwater and marine ecosystems. Diatoms account for about half of net primary oceanic productivity and control to a significant extent global biogeochemical cycles of silica and carbon. BCCM/DCG is hosted by the Laboratory for Protistology & Aquatic Ecology (PAE, Ghent University, Belgium), internationally renowned for its research on diatom taxonomy, evolution, ecology and extended knowledge of complex diatom life cycles. Next to diatoms, other microalgae (Chlorophyta, Haptophyta) interesting from a scientific or applied perspective are also included in the DCG collection.

BCCM/DCG currently holds 514 publicly available strains (all the isolates are original, from wide geographic area) belonging to 48 species (representing all the principal phylogenetic lineages and ecological groups) most of which are cryopreserved to limit genetic drift. All strains are living monoclonal cultures that can be grown in standard liquid culture media (WC or 3NBBM+V medium for freshwater microalgae, f/2+Si for marine diatoms). Next to the biological material, there is for the majority of the strains, extra data available: growth temperature, mating system, auxosporulation type, auxosporulation threshold cell size, initial cell size, minimal cell size, and sequence data (ITS, SSU, LSU and rbcL). Additionally, many of the strains/taxa available at BCCM/DCG are or have been intensively studied by the host lab members and their collaborators. Their research is mainly focused on diatom genomics, cell and life cycle, determination and comparison of (eco)physiological properties, ecological interactions, and diatom population genetics, evolution and diversity. Because of this, there is a substantial knowledge and background information available for almost every microalgae strain existing in the BCCM/DCG collection. Next to that, references of scientific papers in which particular microalgae strains have been studied are also given.

We accept both, public and safe deposits of microalgae. Public deposits come without any costs for the depositor, the strain information is published in the BCCM/DCG catalogue and the microalgae are available for researchers worldwide. Safe deposits of microalgae are handled using a professional contract.

The main purpose of BCCM/DCG is to make healthy and well studied diatoms and other microalgae strains available for academic and industrial partners. On top of that we also offer a wide range of services including: basic and advanced cryopreservation techniques, biochemical analysis, pheno- and genotypic characterization, scanning electron microscopy, tailor made courses and training, isolation of microalgae, etc. We also welcome fundamental and applied contract research and are always eager to work together with you to make your algal projects more successful.

Cultures in this BRC have been and are used for research, teaching, aquaculture, biotechnology, and various other projects throughout the world. Accession, control, preservation, storage and supply of microalgae and related information in the frame of all deposits are ISO 9001:2015 certified.

Keywords: diatoms; microalgae; cryopreservation; public collection; strain distribution; safe deposit; long time storage